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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,207	01/26/2001	Gregory H. Slocum	020431.0731	7186

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EXAMINER
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JARRETT, SCOTT L

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/771,207

Applicant(s)

SLOCUM, GREGORY H.

Examiner

Scott L. Jarrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 37-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This **Final** Office Action is responsive to Applicant's amendment filed May 10, 2005. Applicant's amendment canceled claims 1-36 and added new claims 37-48. Currently claims 37-48 are pending.

#### ***Response to Amendment***

2. Applicant's amendment filed on May 10, 2005 with respect to canceled claims 1-36 and added new claims 37-48 necessitated new ground(s) of rejection.

#### ***Response to Arguments***

3. Applicant's arguments filed May 10, 2005 with respect to canceled claims 1-36 and new claims 37-48 have been considered but are moot in view of the new ground(s) of rejection.

In applicant's remarks filed May 10, 2005 applicant argues that the office action refers to portions of Chase that were either not properly cited on the Notice of References form (PTO-892) and/or not provided with the first office action on the merits.

Examiner thanks applicant for bringing this oversight to his attention an updated Notice of References form (PTO-892) as well as copies of cited non-patent literature is provided with this office action.

***Abstract***

4. The abstract of the disclosure is objected to because the abstract does not accurately reflect the scope of the claimed invention based on the applicant's cancellation of claims 1-36 and addition of new claims 37-48. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

5. Claim 41 is objected to because of the following informalities: claim 41 contains three grammatical errors of the form "...using the computer system, determining,..." instead of the intended "...using the computer system, determining to determine,...". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 37-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding Claims 37, 41 and 45 the specification does not reasonably provide enablement for determining the demand quantity of an end product that a manufacturer is to produce to satisfy predicted future demand, a second intermediate-product quantity that the manufacturer can produce or the total by-product quantity that the manufacturer can produce. Without this disclosure one skilled in the art would be unable to practice the invention without undue experimentation.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 37, 39-41, 43-45 and 47-48 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Carlson Jr. et al., U.S. Patent No. 4,646,238.

Regarding Claims 37, 41, and 45 Carlson Jr. et al. teach a system and method for "...controlling the flow of semiconductors and their components through a production facility including assembly and final testing of a large number of different products with multiple product grades." (Abstract) and further that "The task for production control is to identify and schedule the correct sequence of tests and an adequate supply of untested material coming out of assembly to support the demand for all items." (i.e. determine the demand for the end, intermediate and by-products and then insure that the manufacturing process produces/creates the necessary products to meet the predicted demand; Column 2, Lines 11-15; Figure 1).

More specifically Carlson Jr. et al. teach a computerized method (system) for manufacturing forecasting (planning, predicting, estimating, calculating, etc.) comprising:

- storing information indicative of the predicted end product demand and a total amount of an intermediate (component, co-product, by-product) product that can be

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produced ("The system stores information on the demand and inventory of all product grades together with grade distribution data giving the yield of all co-products...")

Abstract; Column 6, Lines 57-68; Column 6, Lines 24-35; Figure 2, Elements 1B, 1C);

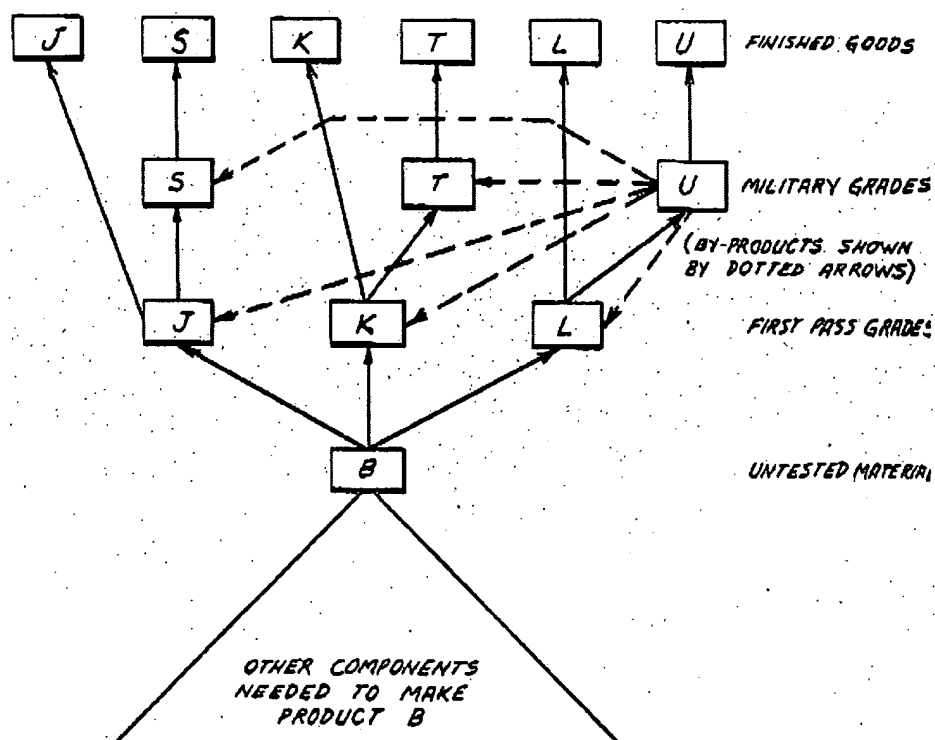
- determining an end product demand quantity that a manufacturer is to produce to satisfy predicted demand, based on the end product demand information, wherein the production of the end product demand requires a first intermediate-product quantity that is further processed (e.g. tested) to produce the end product quantity demand and requires (involves) producing a first by-product ("...these grades are by-products of each other." Column 3, Line 8; Column 2, Lines 62-68; Column 3, Lines 1-2; Column 5, Lines 16-26; Column 6, Lines 60-63);

- determining a second intermediate-product quantity that the manufacturer can produce in addition to the first intermediate-product quantity wherein the second intermediate-product involves/requires producing a second by-product quantity (Column 7, Lines 36-68; Column 8, Lines 1-40; "...cumulative demand and cumulative yield for each successive grade.", Column 11, Lines 25-27); and

- determining a total by-product quantity the manufacturer can produce based on the end product demand quantity and the second intermediate-product quantity (Column 7, Lines 36-68; Column 8, Lines 1-40; "Once the net requirements for all grades in the family have been calculated... co-product processing is carried out to determine the proper quantity of the component common to all grades which will yield enough of each grade to cover all of their requirements.", Column 10, Lines 47-54).

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Carlson Jr. et al. further teach that the manufacturing system and method extends well known Materials Requirement Planning (MRP) systems so that such systems can take into account "...these by-products..." (Column 2, Line 65). Carlson Jr. et al. teach that traditional MRP systems utilize a bill of materials to define, manage and plan (forecast) the source components/sub-components (assemblies, intermediate products, etc.) of a plurality of products down to the raw materials level (Column 2, Lines 33-40; Column 3, Lines 26-30).

*Fig. 1.*



Regarding Claims 39, 43 and 47 Carlson Jr. et al. teach a manufacturing system and method wherein the system determines the quantity of product that can be produced for each member of a family of related products including but not limited to the quantity of intermediate product that can be produced during a particular time period ("two periods"; Column 7, Lines 45-58; "one week at a time"; Column 8, Lines 3-40; "week to week"; Column 10, Lines 40-44).

Regarding Claims 40, 44 and 48 Carlson Jr. et al. teach a manufacturing forecasting system and method wherein the system determines the quantity of product that can be produced for a family of related products as discussed above. Carlson Jr. et al. further teaches that the manufacturing forecasting system and method stores by-product information representative of a total amount of by-product that can be produced during a particular period of time ("two periods"; Column 7, Lines 45-58; "one week at a time"; Column 8, Lines 3-40; "week to week"; Column 10, Lines 40-44).

	Period 1	Period 2	
Demand	300	500	
Inventory	50		55
By-product	100	100	
Net demand	350	400	

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 38, 42 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson Jr. et al., U.S. Patent No. 4,646,238 as applied to claims 37, 39-41, 43-45 and 47-48 above, and further in view of Chase et al., Production and Operations Management: Manufacturing and Services (1995).

Regarding Claims 38, 42 and 46 Carlson Jr. et al. teach a system and method for forecasting the demand for a plurality of related products (family of products; end, intermediate, co-products and by-products) in a manufacturing process/facility and that the system extends the ability of well known MRP systems to take into account the production and management of by-products (family of products; co-products, intermediate products, etc.) as discussed above.

More specifically Carlson Jr. et al. teach that the manufacturing forecasting system and method is for "...controlling the flow of semiconductors and their components through a production facility including assembly and final testing of a large number of different products with multiple product grades." (Abstract).

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While it is old and very well known that semiconductor manufacturing is the process used to create integrated circuits and that semiconductor manufacturing involves a sequence of photographic and chemical processing steps during which electronic circuits are gradually created on a wafer made of pure semiconductor material Carlson Jr. et al. does not expressly teach that the products produced are chemical products as claimed.

Chase et al. teach the application of well known MRP systems to chemical manufacturing, in an analogous art of manufacturing management (demand forecasting, capacity planning, etc.), for the purposes of managing (what products to produce, how much to product of each product, etc.; Examples 19.1 and 19.2, Pages 777-781) the manufacture/assembly of products to meet predicted/forecasted demand (MRP, Page 588; Exhibit 15.1, Page 589; Section 15.1, Pages 589-590; Sections 19.8, Page 771; Exhibit 19.3, V Plant, Page 772).

Chase et al. further teach a plurality of well-known and common manufacturing methods, processes and systems that are utilized to manage the flow of materials (raw materials, assemblies, components, end/finished products, supplies, work in progress, etc.) through a production/manufacturing facility including but not limited to inventory/manufacturing management for dependent demand (i.e. product family, demand for products that are related such as the components associated with an end-product wherein the component demand is directly related to the end-product's demand; Pages 544-549).

It would have been obvious to one skilled in the art at the time of the invention that the manufacturing system and method, with its ability to extend traditional MRP systems to include by-products, as taught by Carlson Jr. et al. would have benefited from being applied to a plurality of manufacturing processes/products including but not limited to chemical products in view of the teachings of Chase et al.; the resultant system providing for the ability to control and manage the flow of a family of chemical and other related products a production/manufacturing facility (Carlson Jr. et al.: Abstract).

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Quame, Babington, U.S. Patent No. 4,547,263, teach a method and system for managing the manufacturing of paper products wherein chemical by-products are produced/captured as part of the production of end products.

- Khan et al., U.S. Patent No. 6,190,636, teach a method for capturing/recycling chemical by-products from manufacturing processes.

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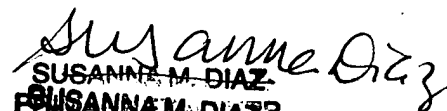
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SJ  
7/25/2005



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